

CLAIM AMENDMENTS

The following listing of claims will replace all prior versions and listings of claims in the instant application. The present status of each claim is indicated in parentheses following the claim number. An instruction line precedes each claim that is amended, canceled, or added by the instant paper.

1-41 (Canceled)

42. (CURRENTLY AMENDED) An isolated or purified nucleic acid encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:8, ~~said amino acid sequence comprising at least one immunogenic epitope.~~

43. (Previously Presented) The nucleic acid of claim 42, wherein said nucleic acid comprises nucleotides 10-1332 of SEQ ID NO:7.

44. (Canceled)

45. (Previously Presented) The nucleic acid of claim 42, further comprising an expression control sequence operably linked to said nucleotide sequence.

46. (Previously Presented) The nucleic acid of claim 45, wherein said expression control sequence comprises a promoter.
47. (Previously Presented) The nucleic acid of claim 45, wherein said expression control sequence comprises an enhancer.
48. (CURRENTLY AMENDED) A method of preparing a polypeptide comprising a carboxy-terminal portion of the heavy chain of botulinum neurotoxin serotype B ~~having at least one immunogenic epitope~~, comprising:
- transfecting a cell with a nucleic acid encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:8, ~~said amino acid sequence having at least one immunogenic epitope~~; and
- culturing the transfected cell under conditions wherein the nucleic acid is expressed and said carboxy-terminal portion of the heavy chain of botulinum neurotoxin serotype B is produced,
- wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell.

49. (CURRENTLY AMENDED) The method of claim 48, further comprising recovering from said transfected cell at least one insoluble polypeptide comprising the amino acid sequence of SEQ ID NO:8, ~~said amino acid sequence having at least one immunogenic epitope.~~
50. (Previously Presented) The method of claim 48, wherein said cell is *Escherichia coli*.
51. (Previously Presented) The method of claim 48, wherein said cell is *Pichia pastoris*.
52. (Canceled)
53. (CURRENTLY AMENDED) A method of isolating an immunogenic polypeptide comprising the amino acid sequence of SEQ ID NO:8, ~~said amino acid sequence having at least one immunogenic epitope~~, comprising:

culturing a cell transfected with an expression vector comprising a nucleic acid encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:8, ~~said amino acid sequence having at least one immunogenic epitope~~ under conditions wherein the nucleic acid is expressed; and

isolating from said transfected cell at least one
insoluble polypeptide comprising the amino acid
sequence of SEQ ID NO:8, ~~said amino acid sequence~~
~~having at least one immunogenic epitope,~~

wherein the cell is selected from the group consisting
of a gram negative bacteria, a yeast, and a mammalian
cell and wherein the isolated polypeptide is
immunogenic.

54. (Canceled)

55. (Previously Presented) The nucleic acid of claim 42,
wherein the AT content is less than about 70% of the
total base composition.

56. (Previously Presented) The nucleic acid of claim 55,
wherein the AT content is less than about 60% of the
total base composition.

57-81. (Canceled)

82. (Previously Presented) A recombinant host cell
comprising the nucleic acid of claim 45, wherein said
nucleic acid is expressed.

83-84. (Canceled)

85. (CURRENTLY AMENDED) The recombinant host cell of claim 82, wherein said nucleic acid is expressed as a polypeptide, and wherein said polypeptide is at least 0.75% (w/w) of the total cellular protein.
86. (Previously Presented) The recombinant host cell of claim 85, wherein said polypeptide is at least 20% (w/w) of the total cellular protein.